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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,505	07/09/2003	Jeff Sommers	IVGN 516	1746
52059 7590 01/16/2007 INVITROGEN CORPORATION C/O INTELLEVATE P.O. BOX 52050 MINNEAPOLIS, MN 55402			EXAMINER LEVKOVICH, NATALIA A	
			ART UNIT 1743	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			01/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.		Applicant(s)	
	10/616,505		SOMMERS ET AL.	
	Examiner		Art Unit	
	Natalia Levkovich		1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 17-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restriction

1. Applicant's election without traverse of species I (claims 1-16) in the reply filed 10/30/2006 is acknowledged.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the spring that 'urges the inlets / outlets against the conduits', as well as the inlet / outlet ports of the 'chip cartridge interface' must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

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application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being unclear for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 10, the 'engaged position' lacks antecedent basis, since it has not been clearly set forth in the preceding lines. It is also unclear whether or not the 'heating / cooling element' is designed for heating, for cooling, or for both. For the purposes of examination, it is assumed that it can be either one. Additionally, the structural inter-relationships between the spring and the rest of the recited elements are unclear. Is the spring mounted on the cartridge guide or on some other parts of the interface assembly ?

In claim 2, line 5, 'each inlet port and each outlet port' lack antecedent basis. It is unclear whether or not the ports of the biochip cartridge (recited in claim 2), or the ones of the 'movable cartridge interface' (recited in claim 1) are meant.

With respect to claims 15 and 16, it is not clear whether or not the Applicant is trying to re-define, or to further define the claimed structure. The structural inter-relationships between the element recited in claim 15 and the elements of claim 1 are unclear.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-3, 5 and 15-16 are rejected under 35 U.S.C. 102(b) as anticipated by Gleave et al. (US 5785856).

Gleave discloses an automated extraction apparatus comprising, as illustrated in Figures 1, 2, 4, 6 and 10, a fluid circulation system['fluidic circuit' – Ex.] which includes tray 23 [as a constituent of the 'movable chip cartridge interface' – Ex.] configured to accommodate sample containment cells 22 ['chip cartridges' – Ex.]. The tray defines cell-receiving support bays 136 ['chip cartridge guides' – Ex.]. The apparatus also includes oven assembly 24 ['heating element'], inlet / outlet conduits 44, 46 ['first and

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second fluid conduits' – Ex.], passageways 112 and 113 ['inlet and outlet ports' – Ex.] and pump 28.

Claim 1 recites a spring. However, this element is not positively claimed as a part of the device, and, therefore, is not accorded any patentable weight. The same consideration applies to the 'chip cartridges'.

Regarding claims 2, 3 and 5, Figure 10 discloses sealing assemblies 116 including filters / frits 117 and conduits 44, 46 each ending with nozzle members 163 ['probes' – Ex.].

7. Claims 1-3, 7-10 and 12-16 are rejected under 35 U.S.C. 102(e) as anticipated by Loeffler et al. (US 6673620).

Loeffler discloses a fluid handling apparatus (illustrated in Figure 11) comprising a plurality of modular fluidic cells /'circuits' (shown in more detailed manner in Figures 1-2). Each module includes two fluid ports (19, 21), nest base 11 ['cartridge guide' – Ex.], gasket 3 and heating plate 7. "Fluids can be added or removed through a fluid port in the wall of the chamber...and an actuator is able to move the fluid port and conduit relative to each other to engage the conduit and fluid ports to each other so that the two are in fluid communication" (Col.4, lines 50-60). Fluids are introduced via the ports by injectors / 'probes' 25 (depicted in Figure 9).

Regarding claims 7 and 12-13, Figures 3 and 4 "demonstrate the presence of two elastomeric valve stems 4a and 4b that are part of the same molded gasket 3. The valve stems 4a and 4b fit into valve seats 6a and 6b, respectively [thus, forming 'reversing valves' – Ex.]. Valve seats 6a and 6b are formed as recesses in the

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underside of the plastic cover 1. When the valve stems 4a and 4b are inserted into valve seats 6a and 6b, the valve stems occlude fluid or air flow into or out of the fluid ports 19 and 21" (Col. 6, lines 60 plus). Figure 11 shows vessels 61, 63 ['reservoirs', sample tubes' – Ex.].

With respect to claims 8-10, the spring and the motor (including all its parts) are not positively claimed as elements of the invention and, consequently, are not accorded patentable weight.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 4-6, 11 and # are rejected under 35 U.S.C. 103(a) as being unpatentable over Loeffler et al.

With respect to claims 4-6, Loeffler does not teach the gaskets to include filters / frits made of stainless steel, as well as probes / injectors being made of this material. However, it would have been clearly within the ordinary skill of an artisan at the time the invention was made to have employed filters / frits in the modified apparatus of Loeffler, in order to provide additional options during fluid handling processes. It would have been also obvious to have made these elements (as well as probes, or other fluid contacting parts) of stainless steel, since this material is well recognized for its excellent mechanical characteristics, as well as corrosive resistance, durability and commercial availability.

Regarding claim 11, although Loeffler does not teach inductive proximity switches, these position sensors are commonly used in the art. It would have been obvious to one of ordinary skill in the art to have employed such sensors in the modified apparatus of Loeffler, as reliable and commercially available non-contact means needed for precise positioning of moving elements (such as injectors / probes) over cells.

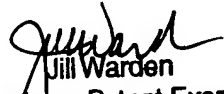
Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalia Levkovich whose telephone number is 571-272-2462. The examiner can normally be reached on Mon-Fri, 8 a.m.-4p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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